

4/26/2006 Rhodes, Christopher

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

1  
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3 - - - - - x  
4 L.P. MATTHEWS, L.L.C., :  
5 Plaintiff, :  
6 vs. : Civil Action  
7 BATH & BODY WORKS, INC.; : No. 04-1507 (SLR)  
8 LIMITED BRANDS, INC.; KAO  
9 BRANDS CO., (f/k/a THE :  
10 ANDREW JERGENS COMPANY);  
11 and KAO CORPORATION, :  
12 Defendants. :  
13 - - - - - x  
14 Deposition of CHRISTOPHER T. RHODES, Ph.D., a witness  
15 herein, called for examination by counsel for Defendant  
16 in the above-entitled matter, pursuant to notice, the  
17 witness being duly sworn by Robert M. Jakupciak, a  
18 Notary Public in and for the District of Columbia, taken  
19 at the offices of Robins, Kaplan, Miller & Ciresi, L.L.P.,  
20 1801 K Street, N.W., Washington, D.C., 20006, at 9:00 a.m.,  
21 on April 26, 2006, and the proceedings being taken down  
22 by Stenotype by Robert M. Jakupciak, RPR.

1

4/26/2006 Rhodes, Christopher

1  
2 APPEARANCES:  
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17 RICHARD L. CHINN, ESQUIRE  
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## C O N T E N T S

1 THE WITNESS: CHRISTOPHER T. RHODES, Ph.D.  
2 EXAMINATION PAGE NO.  
3 By Mr. Baxter ..... 4

## E X H I B I T S

1 RHODES EXHIBIT NUMBER PAGE NO.  
2 1 Curriculum Vitae ..... 49  
3 2 Rhodes Report ..... 109  
4 3 Rhodes Updated Report ..... 109  
5 4 '062 Patent ..... 133  
6 5 '485 Patent ..... 150  
7 6 Rhodes Responsive Report ..... 216

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1 Whereupon,  
2 CHRISTOPHER T. RHODES, Ph.D.,  
3 called for examination by counsel for Defendant and  
4 having been duly sworn by the Notary Public, was  
5 examined and testified as follows:  
6 EXAMINATION BY COUNSEL FOR DEFENDANT  
7 BY MR. BAXTER:  
8 Q. Good morning.  
9 A. Good morning.  
10 Q. Could you please state your full name  
11 for the record?  
12 A. Christopher Thomas Rhodes. R-H-O-D-E-S.  
13 Q. Could you please state your current  
14 address for the record?  
15 A. 28 Prospect Avenue, Narragansett, Rhode  
16 Island.  
17 Q. Is it Dr. Rhodes or Professor Rhodes or  
18 Mr. Rhodes?  
19 A. Professor Rhodes is perfectly  
20 satisfactory, thank you, sir.  
21 Q. My name is Steve Baxter, and I represent  
22 the Kao defendants in this litigation. Do you

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1 you would like to see the documents, you can ask for  
2 them.

3 A. In the absence of going through the  
4 transcripts, I'm afraid I can't be more helpful.

5 Q. Sitting here today you just can't  
6 remember?

7 A. I just can't remember.

8 Q. Now let me hand you a copy of U.S.  
9 Patent 5,013,485, which we have marked as Rhodes  
10 Exhibit Number 5. Can you identify Rhodes Exhibit  
11 Number 5?

12 A. Yes, I can.

13 Q. I notice you cite that, I believe, as  
14 Exhibit 4 on the very bottom of page 4 of your  
15 updated report.

16 A. Can I just turn to that?

17 Q. Sure. I was going to do it for you.  
18 But that's okay.

19 A. Page 4.

20 Q. The very bottom. Page 4, where it says  
21 the claim term orange oil.

22 A. Yes.

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1 Q. Then you go on.

2 A. I see. Yes.

3 Q. So Rhodes Deposition Exhibit Number 5 is  
4 Exhibit 4 of your updated expert report?

5 A. Yes, sir. The numbers are beginning to  
6 jump around a bit, but I think I'm on track at the  
7 moment.

8 Q. We will just try to keep it straight.  
9 Now you say: Based on Rhodes Exhibit Number 5, I  
10 conclude that orange oil can perform cleaning at  
11 levels of 0.01 percent or lower. Do you see that?

12 A. Correct. Yes, sir.

13 Q. Aside -- first of all, when was the  
14 first time you saw Rhodes Exhibit Number 5?

15 A. I don't recall.

16 Q. Was it during the course of this  
17 litigation?

18 A. Oh, yes. I had never seen that patent  
19 before January '06.

20 Q. Did you find that patent yourself?

21 A. No, sir.

22 Q. Was it provided to you by Mr. Buratti or

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1 somebody at Robins Kaplan?

2 A. I think it was Mr. Buratti who provided  
3 it to me, yes.

4 Q. Do you have any basis other than Rhodes  
5 Exhibit Number 5 to believe that orange oil can  
6 perform cleaning at levels of 0.01 percent or lower?

7 A. Yes, I do.

8 Q. Can you tell us those?

9 A. Certainly. In the '062 patent itself,  
10 the patentees report studies in which they go down  
11 to orange oil concentrations at 5 percent. And if I  
12 may just turn to the '062 patent.

13 Q. You may want to turn to column 6.

14 A. Thank you. It tells us that the  
15 effectiveness of the products, of the cleaning  
16 ability, was reduced. It could still remove  
17 cosmetic products. It wasn't good or as effective  
18 at removing caulking compounds and so on.

19 So the first thing I know, looking at  
20 the patent, we have got products which contain a  
21 number of different concentrations of the oil. And  
22 certainly if you look at the claim, we are talking

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1 about orange oil up to 45 percent, and within the  
2 patent itself we see data going down to 5 percent  
3 which has still got cleaning properties but not as  
4 good as higher concentrations.

5 So the first thing I can do as a  
6 scientist who has worked on emulsions, skin lotions,  
7 is carry out an extrapolation procedure and say,  
8 well, it will certainly be, still be effective at  
9 lower concentrations. It may require a little  
10 longer application, but an extrapolation procedure.  
11 So that's the first approach I can use.

12 The second approach I can use is my  
13 knowledge of the use of surfactants and of solvents,  
14 knowing that surfactants in particular are very  
15 active even at very low concentrations, and so I  
16 know that the limits of the effectiveness of the  
17 teachings of the '062 patent are going to be much  
18 lower than 5 percent. And I believe that in the  
19 prosecution file history, that when the patent was  
20 first submitted, in fact there was an indication  
21 that the product would be effective at quite low  
22 concentrations.

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1 But where I found the patent that you  
2 just put before me, the '485 patent, particularly  
3 useful was I already knew that the teachings would  
4 be useful well below 5 percent. This patent gave me  
5 a lower limit, which was very much in line with what  
6 I had previously hypothesized.

7 So the '485 patent was confirmatory in  
8 nature. And I found it very useful in that sense.

9 Q. Does the '062 patent itself report any  
10 testing of a cleaning composition which contains  
11 less than 5 percent orange oil?

12 A. I think I've already told you the lowest  
13 concentration reported in the '062 patent is 5  
14 percent.

15 Q. Do you know why or how the number 5  
16 percent was arrived at?

17 MR. BURATTI: Objection to form.

18 A. Could you rephrase that question,  
19 please, counsel?

20 Q. Do you know how -- strike that. Do you  
21 know how the inventors arrived at the number 5  
22 percent?

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1 MR. BURATTI: Same objection.

2 A. I'm still not quite sure I understand.  
3 Are you asking me do you know why the inventors  
4 didn't carry out tests at say 1 percent or 2  
5 percent? Is that what you are asking me?

6 Q. No.

7 A. No, you are not. Could you -- I'm  
8 regretting to say I'm quite lost. Could you  
9 rephrase the question?

10 Q. Do you know how the inventors arrived at  
11 the number 5 percent? Why did they determine that  
12 it would work with as little as 5 percent?

13 MR. BURATTI: Objection to form. Calls  
14 for speculation.

15 Q. Why didn't they say as little as one  
16 percent?

17 MR. BURATTI: Same objection.

18 A. I'm not sure, I'm still not sure I  
19 understand the question. What they have done is  
20 they presented data with various concentrations of  
21 olive oil -- orange oil, and the lowest one they  
22 have reported in the patent is 5 percent.

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1 Q. That's the lowest effective amount they  
2 have reported in the patent?

3 MR. BURATTI: Objection to the form and  
4 misleading.

5 Q. Is that correct?

6 A. That's the product with the lowest  
7 concentration that they report.

8 Q. Isn't it true that that sentence says:  
9 From these tests, applicants concluded that with  
10 respect to cosmetics, a composition according to the  
11 present invention could have as little as 5 percent  
12 by volume of orange oil, although it was preferable  
13 to have a cleaning composition having at least 25  
14 percent by volume of orange oil? Isn't that what it  
15 says?

16 A. You have read out that sentence  
17 correctly.

18 Q. Doesn't that indicate that 5 percent is  
19 the lowest amount that they considered effective for  
20 cleaning as the tests are set out in the  
21 application?

22 MR. BURATTI: Objection to form.

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1 A. I disagree. I think what that's saying  
2 is if you are interested particularly in having a  
3 cleansing composition to remove the real toughies,  
4 like calking compounds, et cetera, et cetera, then 5  
5 percent may not be appropriate. However, if you are  
6 interested in removing cosmetics or other forms of  
7 dirt which are less tenacious, then 5 percent or  
8 even less may be perfectly appropriate.

9 Q. Where does the even less come? It  
10 doesn't say as little as. It doesn't say as little  
11 as 5 percent or less, does it?

12 MR. BURATTI: Object.

13 Q. Where do you read in the or less?

14 MR. BURATTI: Objection to form.

15 A. What I read is this. Applicants  
16 concluded that with respect to cosmetics, a  
17 composition according to the present invention could  
18 have as little as 5 percent volume. They can only  
19 state that because that's all they've tested. Since  
20 they haven't tested below 5 percent, they don't make  
21 a statement about it. So they are being very  
22 cautious, they are being very conservative and I'm

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1 not taking issue with that statement.  
 2 What I'm saying is the person skilled in  
 3 the art who reads that is going to say I understand  
 4 what the authors -- sorry -- what the patentees did,  
 5 but I have good reason to believe that this product,  
 6 the teachings of this invention will still be  
 7 effective at lower concentrations.

8 Q. Why do -- strike that.  
 9 So your understanding -- let me see if I  
 10 can put it this way. Your understanding that that  
 11 sentence means you could use less than 5 percent is  
 12 based on an understanding that the inventors didn't  
 13 do any testing below 5 percent? Is that what you  
 14 are saying?

15 A. No.

16 MR. BURATTI: Objection to form and  
 17 mischaracterizes testimony.

18 A. That's not what I'm saying. What I'm  
 19 saying is this. In the patent the lowest  
 20 concentration of orange oil that the inventors  
 21 report that they evaluated was 5 percent. At that  
 22 concentration the product is less effective than

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1 some of the higher concentrations in removing  
 2 materials such as calking compounds, sealants, et  
 3 cetera. It's still apparently working well on  
 4 cosmetic products.

5 And what I'm saying is the person  
 6 skilled in the art who reads that says, well, the  
 7 patentees, the lowest concentration they've studied  
 8 at 5 percent; that certainly does not exclude the  
 9 use of the teachings of the patent at lower  
 10 concentrations. And I would think the person  
 11 skilled in the art would say I have every reason to  
 12 expect that there will still be cleansing ability.

13 I think when you look at a cleansing  
 14 product, there is not a sudden concentration that at  
 15 5 percent it cleanses but 4.9 percent it doesn't  
 16 cleanse. That's my first point.

17 My second point is that someone skilled  
 18 in the art, knowing that you are dealing with an  
 19 organic solvent, knowing that you are dealing with a  
 20 surfactant, would expect that the cleansing ability  
 21 would still be demonstrated at lower concentrations  
 22 of orange oil.

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1 - - -  
 2 (There was a pause in the proceedings.)  
 3 - - -

4 BY MR. BAXTER:

5 Q. When you read the '062 patent, do you  
 6 understand that the inventors did not test any  
 7 compositions which contained less than 5 percent  
 8 orange oil?

9 MR. BURATTI: Objection; form.

10 A. All I can say is the lowest  
 11 concentration reported by the inventors in the  
 12 patent is 5 percent.

13 Q. Isn't it reasonable to interpret that  
 14 sentence that the inventors tested at 4 percent and  
 15 found that it didn't work?

16 A. I would find that totally unreasonable.  
 17 I think if they had done that, they would have  
 18 reported it. I see no evidence of that whatsoever.  
 19 And I note that in the claims there is no  
 20 suggestion, either in claim 6 or claim 9, that the  
 21 orange oil has to be above 4 percent but less than  
 22 45 percent. It simply says less -- equal to or less

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1 than 45 percent.

2 Q. If, in fact, there were testing carried  
 3 out using the very methods described in the '062  
 4 patent that showed that less than 4 percent --  
 5 strike that -- less than 5 percent orange oil was  
 6 not effective for cleaning, would that change your  
 7 opinion?

8 MR. BURATTI: Objection to form.

9 A. I would want to look very carefully at  
 10 that data.

11 Q. Why?

12 A. I would want to evaluate the data very  
 13 carefully. All I know is at the moment the only  
 14 data I've got to go on this point is what is in the  
 15 patent. And nowhere in the patent do I see any  
 16 suggestion that the patentees tested at 4 percent  
 17 and found no cleaning properties at all.

18 Q. I'm asking you a hypothetical; that if  
 19 the testing was carried out in exactly the same way  
 20 as the '062 patent and used exactly the same  
 21 criteria for cleaning efficacy, and it showed that  
 22 using, for example, 4 percent orange oil was

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1 IN THE UNITED STATES DISTRICT COURT  
 2 FOR THE DISTRICT OF DELAWARE  
 3 - - - - - x  
 4 L.P. MATTHEWS, L.L.C., :  
 5 Plaintiff, :  
 6 vs. : Civil Action  
 7 BATH & BODY WORKS, INC.; : No. 04-1507 (SLR)  
 8 LIMITED BRANDS, INC.; KAO  
 9 BRANDS CO., (f/k/a THE : CONFIDENTIAL  
 10 ANDREW JERGENS COMPANY);  
 11 and KAO CORPORATION, :  
 12 Defendants. :  
 13 - - - - - x  
 14 VOLUME II  
 15 Video deposition of CHRISTOPHER T. RHODES,  
 16 Ph.D., a witness herein, called for examination by  
 17 counsel for Defendant in the above-entitled matter,  
 18 pursuant to notice, the witness being duly sworn by  
 19 Robert M. Jakupciak, a Notary Public in and for the  
 20 District of Columbia, taken at the offices of  
 21 Robins, Kaplan, Miller & Ciresi, L.L.P., 1801 K  
 22 Street, N.W., Washington, D.C., 20006, at 9:00 a.m.,

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1 on April 27, 2006, and the proceedings being taken  
 2 down by Stenotype by Robert M. Jakupciak, RPR.  
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 22

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 8 (703) 413-3000  
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 11 Also Present  
 12 Matt De Leon, Videographer  
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## C O N T E N T S

THE WITNESS: CHRISTOPHER T. RHODES, PH.D

EXAMINATION PAGE NO.

By Mr. Baxter ..... 250

By Mr. Ward ..... 310

## E X H I B I T S

RHODES EXHIBIT NUMBER PAGE NO.

7 E-mail ..... 457

8 E-mail ..... 457

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MR. BAHOU: A. J. Bahou.

MR. CHINN: John Ward, of Ward and

Olivo, for Bath &amp; Body Works and Limited Brands.

MR. BAXTER: Stephen Baxter, for Kao

defendants.

MR. CHINN: Richard Chinn, for the Kao

defendants.

MR. BAXTER: Are we ready to begin?

EXAMINATION BY COUNSEL FOR DEFENDANT

BY MR. BAXTER:

Q. Good morning.

A. Good morning.

Q. Welcome back, Professor Rhodes. In front of you I stacked the exhibits that we looked at yesterday in that order, one through six. I would like you to find Rhodes Exhibit Number 3 in that stack.

And you recognize that again as your updated expert report?

A. This is my updated expert report, Exhibit Number 3.

Q. Thank you. I would like you to again

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Whereupon,

CHRISTOPHER T. RHODES, PH.D.,

called for examination by counsel for Defendant and having been previously sworn by the Notary Public, was examined and testified as follows:

VIDEOGRAPHER: This is tape number one in the videotape deposition of Christopher Rhodes being held in the matter of LP Matthews, LLC versus Bath & Body Works, Incorporated, Limited Brands Incorporated, KAO Brands, formerly known as Andrew Jergens Company, and Kao Corporation, before the United States District Court of Delaware, Civil Action Number 04-1507 SLR. This is a continued deposition. The time is 9:11. My name is Matt De Leon, from the firm of Henderson Legal Services. I'm the certified legal video specialist. The court reporter is Robert Jakupciak, in associate with Henderson Legal Services. Will counsel please introduce themselves.

MR. BURATTI: Jason Buratti and A. J. Bahou from the law firm Robins, Kaplan, Miller & Ciresi, for plaintiff LP Matthews.

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flip back to page 4 of Rhodes Exhibit Number 3. In that last paragraph, the first sentence of that last paragraph I would like you to look at, and I believe that reads: The claim term, quote, orange oil, close quote, means the non-water soluble part of an orange, period. Do you see that sentence?

A. Yes, sir.

Q. Does that mean that -- strike that.

Are orange pits soluble in water?

MR. BURATTI: Objection to form.

A. I'm not quite sure I know the word pit.

P-I-T or P-I-P?

Q. How about seed?

A. Are they soluble in water?

Q. Right.

A. Not unless they are treated in some way to render them soluble. By themselves, orange pits are insoluble in water.

Q. And are orange seeds orange oil?

MR. BURATTI: Objection to form.

A. No, sir. They are not orange oil.

Q. But they are the non-water soluble part

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1 of an orange, aren't they?

2 MR. BURATTI: Objection to form.

3 A. Clearly when you use the term oil, as is

4 being used here, you are referring to something

5 which is liquid; orange oil, so you are talking

6 about a liquid product. Pits, although they are

7 relatively small, they are solid entities.

8 Q. So should the sentence, the first

9 sentence of the last paragraph of page 4 read: The

10 claim term, quote, orange oil, close quote, means

11 the liquid non-water soluble part of an orange?

12 A. Well, since the word oil I think in

13 common parlance means something which is liquid, I

14 think I've already got it there. But for

15 clarification purposes, if you wanted to add the

16 word liquid, I certainly wouldn't object.

17 Q. How do I obtain orange oil from an

18 orange?

19 A. I'm not quite sure I understand the

20 question. Are you asking how do you get it as an

21 item of commerce or how would you prepare it if you

22 were in the business of supplying the oil?

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1 Q. The latter.

2 A. If you are in the business of supplying

3 orange oil, there are a number of different ways

4 that have been used. One is to simply take the

5 whole orange and apply pressure and squeeze out and

6 then in some way separate the water soluble and the

7 oil soluble liquid portions.

8 Another way is to remove the peel or the

9 rind and use that exclusively as your source. And

10 then depending upon the purpose, you might do more

11 than one expression. So there is a number of

12 different ways, but the net result is that the item

13 that you will be obtaining is an oil, it is a

14 liquid, and it is an organic material.

15 Q. I think I would like to ask you a few

16 questions about the first way. And I think you said

17 something -- not the exact words, but something like

18 you would start with the whole orange and crush it

19 to get a liquid and then separate the organic part

20 from the aqueous part; is that correct?

21 A. That is, yes, one way.

22 Q. And how do you do that separation?

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1 A. As I understand it, and I'm not an

2 expert in the preparation of orange oil, the

3 separation can be effected by filtration, by

4 centrifugation and other methods, but this is not an

5 area in which I have great expertise.

6 Q. What are the other methods?

7 A. Of separating out?

8 Q. Sure.

9 A. I don't recall. As I said, this is not

10 an area that I'm expert in, the method of

11 preparation.

12 Q. Can you use steam distillation?

13 A. I think that would be possible -- I

14 don't know. I'm simply going to say you end up, the

15 item of commerce, orange oil, is a liquid, and it

16 contains a number of terpenes, aldehydes, esters, et

17 cetera.

18 Q. I think you said another way of making

19 the orange oil is to start with the peel of the

20 orange?

21 A. That I believe is correct.

22 Q. And how do I turn that peel into orange

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1 oil?

2 MR. BURATTI: Objection to form.

3 A. I've already said I'm not an expert in

4 the methods used in the preparation of the oil. I

5 believe that again it is very largely by an

6 expression process, but I don't know.

7 Q. By expression, do you mean squeezing?

8 A. Basically that is my understanding.

9 Q. Can it be obtained with steam

10 distillation?

11 MR. BURATTI: Objection to form.

12 A. I've already said I -- my knowledge of

13 the methods of preparation of the oil is, to say the

14 least, incomplete. But it is quite possible that

15 might be used. I don't know.

16 Q. What is orange oil?

17 A. I think I've already mentioned --

18 MR. BURATTI: Objection; asked and

19 answered. Go ahead.

20 A. I think I've already mentioned that

21 orange oil is a, at room temperature a liquid, it's

22 an organic material, it contains a number of

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1 different molecular species. D-limonene is  
 2 predominant usually somewhere between 80 and about  
 3 90 percent, but then there are other organic  
 4 materials present in olive -- in orange oil.  
 5 Q. Are there different grades of orange  
 6 oil?  
 7 A. Indeed there are.  
 8 Q. Tell me the different grades of orange  
 9 oil.  
 10 A. Well, the different grades of orange oil  
 11 would depend upon the way in which the orange oil is  
 12 prepared, the price that the supplier puts upon it.  
 13 Q. And how does the way the orange oil is  
 14 prepared -- or strike that.  
 15 How is the way the orange oil prepared  
 16 reflected in the grade of the orange oil?  
 17 MR. BURATTI: Objection to form.  
 18 A. Could you rephrase the question, please,  
 19 counsel?  
 20 Q. I'm going to tell you basically what I'm  
 21 looking for and then I'll try to ask the question.  
 22 I think you said something along the line that the

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1 grade of the orange oil would depend on how, at  
 2 least in part, on how it was prepared. And I just  
 3 want to explore your knowledge of that dependence of  
 4 the grade upon the method of preparation.  
 5 So here is the question. Can you  
 6 explain how the grading of orange oil depends on the  
 7 preparation of the orange oil?  
 8 MR. BURATTI: Objection to form.  
 9 A. Well, with a material such as orange  
 10 oil, the first variable that one has to consider is  
 11 what is the raw material. And different types of  
 12 orange will give me a different orange oil product.  
 13 Also, from year to year the exact blend  
 14 of the various components in orange oil will vary,  
 15 even if the same method is used.  
 16 So the first variable is going to be the  
 17 raw material that is used to prepare the orange oil.  
 18 Q. Okay. But I want to explore the other  
 19 variable, the variable you mentioned of the way its  
 20 prepared. How does the method of preparation affect  
 21 the grade of the orange oil?  
 22 MR. BURATTI: Objection to form.

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1 Counsel, I'm objecting to the word grade. Go ahead.  
 2 A. I have already explained I'm not an  
 3 expert on the method of preparation. The '062  
 4 patent does not specify what particular grade of  
 5 orange oil is used. My understanding is that the  
 6 '062 patent requires orange oil.  
 7 Q. Okay. That may -- so I would like you  
 8 to take a look then at Rhodes Exhibit Number 4,  
 9 which should also be in that stack in front of you.  
 10 A. Yes, sir.  
 11 Q. Again I would like you to turn to the  
 12 last page.  
 13 A. Yes, sir.  
 14 Q. Look at column 10 and claim 6. And do  
 15 you see in claim 6 the term orange oil appears?  
 16 A. Yes.  
 17 Q. Is it your understanding that the term  
 18 orange oil as used in claim 6 of the '062 patent is  
 19 not limited to any specific grade of orange oil?  
 20 MR. BURATTI: Objection to form.  
 21 A. My reading of claim 6 is that it simply  
 22 says orange oil and doesn't make any further

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1 specification about it. It simply says orange oil.  
 2 Q. Okay. I think that was an answer to my  
 3 question, but I'm going to ask you more focused  
 4 questions, you know, the grade and other aspects of  
 5 the orange oil. So, I'm just going to have to ask  
 6 these questions. Because my question was about the  
 7 grade.  
 8 Here is my next question. Is it your  
 9 opinion that the term orange oil as used in claim 6  
 10 of the '062 patent is not limited to orange oil  
 11 prepared from any specific kind of orange?  
 12 A. My understanding is that the term orange  
 13 oil is a term as I have I believe mentioned in one  
 14 of my reports, it means the oil which is derived  
 15 from an orange.  
 16 Q. Is it your opinion that the term orange  
 17 oil as used in claim 6 of the '062 patent is not  
 18 limited to any, to an orange oil which is prepared  
 19 by any specific process?  
 20 MR. BURATTI: Objection to form.  
 21 A. I think that the term orange oil means  
 22 that the material is the whole orange oil. It is

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1 A. Yes, sir.  
 2 Q. Tissues, is that -- is skin a tissue?  
 3 A. Yes, sir.  
 4 Q. And just by way of education, would you  
 5 give me your understanding of what skin is?  
 6 A. Skin is that tissue which covers the  
 7 body, and on the extreme exterior it consists of a  
 8 cornified layer, we have got the dermis, the  
 9 epidermis, and I would normally by the term skin  
 10 exclude mucous membranes such as the lips and so on.  
 11 Q. I've often heard the skin referred to as  
 12 an organ. Have you heard that?  
 13 A. Yes, indeed. And dermatologists say  
 14 they are experts in skin as an organ.  
 15 Q. So this is just an organ that's composed  
 16 of tissue?  
 17 A. Yes, sir.  
 18 Q. How about the outer layer, as you have  
 19 just mentioned? The outer layer is dead, is it not?  
 20 A. Yes. It's the cornified layer, which  
 21 means it is dead.  
 22 Q. Would you still consider that human

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1 tissue?  
 2 A. It's an interesting question. I suppose  
 3 whether you would consider the -- if it's dead, it  
 4 is certainly no longer a living tissue. Is it part  
 5 of my body still? I would say that the dead skin is  
 6 now unwanted tissue and is no longer part of the  
 7 essence of me. But I think we are getting outside  
 8 colloid science. We are getting into rather  
 9 teleological areas.  
 10 Q. Fair enough. How about at the end of  
 11 claim 6, you see it mentions that there is a pH  
 12 within the range of 4.5 to 6, inclusively?  
 13 A. Yes, sir.  
 14 Q. Period. What does inclusively mean to  
 15 you?  
 16 A. It tells me that if someone reading this  
 17 patent took the level as being exactly -- if someone  
 18 came up with a product that is outside that range,  
 19 the range being from 4.5 to 6, if they came up with  
 20 a product outside that range, they have infringed  
 21 the patent, inclusive.  
 22 MR. WARD: Could you read that back?

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1 I'm sorry, I didn't catch the end of that. Just  
 2 read back the answer. You know what? We are just  
 3 about out of tape. So I'll take a look at it. Take  
 4 a quick break.  
 5 VIDEOGRAPHER: The time is 12:08. We  
 6 are going off the record with tape number two.  
 7 - - -  
 8 (Recessed at 12:08 p.m.)  
 9 (Reconvened at 12:20 p.m.)  
 10 - - -  
 11 VIDEOGRAPHER: The time is 12:20 and we  
 12 are back on the record with the beginning of tape  
 13 number three.  
 14 MR. WARD: Could you read back the last  
 15 question and answer, please?  
 16 - - -  
 17 (Whereupon the following portion of the  
 18 testimony was repeated by the Court Reporter:  
 19 QUESTION: What does inclusively mean to  
 20 you?  
 21 ANSWER: It tells me that if someone  
 22 reading this patent took the level as being

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1 exactly -- if someone came up with a product that is  
 2 outside that range, the range being from 4.5 to 6,  
 3 if they came up with a product outside that range,  
 4 they have infringed the patent, inclusive.)  
 5 - - -  
 6 BY MR. WARD:  
 7 Q. I'm a little confused by that answer.  
 8 A. Counselor, I think when I gave it I was  
 9 very confused. May I try again?  
 10 Q. Let's.  
 11 A. Right. It makes it very clear that  
 12 anything within 4.5 to 6 is dead meat. But then I  
 13 think by using the word inclusively, they are  
 14 referring to the precision of the measurement. And  
 15 that what would be -- you might well read it as, as  
 16 being 4.5 plus or minus the error involved in  
 17 determining the pH and 6, plus or minus or, of  
 18 course, minus doesn't come in here. So it would be  
 19 adding the error in.  
 20 So I think this is where they are  
 21 indicating, as they have in the rest of the patent,  
 22 that their pH values are not exact. They are not

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1 precise I should say, they are not precise to say  
2 two decimal figures, so by putting inclusively, they  
3 are saying be aware of the fact that there will be  
4 some error. We are talking about approximate pH.

5 And so they are saying, as I read the  
6 patent, that the precision is no better than  
7 plus/minus half a pH unit, that when you come to  
8 look at this you should interpret this as going from  
9 4, above 4, and below 6.5.

10 Q. Now, I'm going to tell you that in  
11 patent terms, and as you say, you are not a patent  
12 lawyer, I've generally seen the term inclusively  
13 used to mean that the end points of the range are  
14 included. But you are not reading it that way?

15 A. Okay. What you are telling me is this.  
16 I think you are telling me. That if we didn't have  
17 the word inclusively, it would be say 4.51 to 5.99?

18 Q. There is case law to that effect.

19 A. Okay. As I've already said, I am not a  
20 patent lawyer, and to the extent this is a legal  
21 question, I can't answer it.

22 Q. No. I asked you how you read it and I

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1 think you answered my question. And just to briefly  
2 go over the reason that you add half a point to  
3 either end of the range?

4 A. Half a pH unit. Yes.

5 Q. Uh-huh.

6 MR. BURATTI: Objection to form. Is  
7 there a question?

8 Q. Yes. Just if you could briefly --

9 A. Oh, I'm sorry.

10 Q. If you could briefly explain why it was  
11 that you added a half point into the pH range on  
12 either end?

13 A. Throughout the patent there are a number  
14 of pH values indicated. Now, with the exception of  
15 one, which is in Table 1 where it tells me a pH of  
16 4.7, all the other values are either an exact pH  
17 value with nothing on the right of the decimal point  
18 or they are exactly half a pH unit.

19 In no case is there, for example, the  
20 second decimal unit given to us. If the patentees  
21 had been using a pH meter, I would have expected to  
22 see two decimal points in the values that they

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1 record.

2 Additionally, I note that in the tables  
3 where they give the pH, at the head of the pH values  
4 it says very clearly approximate. So when I read  
5 that I say to myself, this is strongly indicating to  
6 me that the method of determining pH used by the  
7 patentees was a colorimetric one, probably using pH  
8 test papers, and with that type of technique it is  
9 not very precise. It may be accurate, but it is not  
10 very precise, and a precision of plus/minus half a  
11 pH unit is reasonable.

12 So that's how I come to this point that  
13 when they are talking about pH values, they are  
14 saying approximate. Although they don't actually  
15 say so in the patent, I take all their values, in my  
16 mind I see plus/minus half a pH unit.

17 Q. Now, in your experience in testifying in  
18 patent matters have you had occasion to analyze  
19 claims that discuss ranges?

20 A. Well, I have obviously met with claims  
21 before and I have given my opinion as a colloid  
22 scientist, as a scientist. The interpretation has

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1 been made by lawyers. And some of the arguments  
2 pertaining to ranges, they have gone over my head, I  
3 don't understand them fully. They are legal  
4 matters. But, yes, to answer your question, I have  
5 testified before on points about ranges.

6 Q. Have you noticed in these instances that  
7 these ranges are usually broad?

8 MR. BURATTI: Objection to form.

9 A. Well, I have testified in some patent  
10 cases on behalf of the patent holder and in some  
11 cases on the behalf of someone who is trying to  
12 invalidate the patent. And obviously I've been  
13 given different interpretations perhaps because of  
14 that.

15 I don't understand all the legal  
16 niceties and I must admit until a few minutes ago  
17 I've now learned something from you counselor, that  
18 I didn't know that if the word inclusive didn't come  
19 at the end you would shave a little bit off that  
20 range.

21 Q. We will argue anything.

22 A. Well, but quite seriously, all I can say

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